



# RHODORSIL® OILS

## 47 V 50 TO 47 V 1000

December 1996

TECHNICAL DATA SHEET  
Cancels and replaces SIL 94 039 3

<b>Description</b>	<b>RHODORSIL OILS 47 V 50 to 47 V 1000</b> are straight chained polydimethylsiloxanic fluids.
<b>Properties</b>	<p><b>RHODORSIL OILS 47 V 50 to 47 V 1000</b> have the following properties :</p> <ul style="list-style-type: none"> <li>• Very good resistance to high and low temperature.</li> <li>• Good combustion resistance.</li> <li>• Good dielectric properties.</li> <li>• Low surface tension.</li> <li>• High compressibility.</li> <li>• Absence of ageing upon exposure to atmospheric agents.</li> <li>• Good oxidation resistance.</li> <li>• Little change in viscosity with temperature.</li> <li>• Good resistance to high and prolonged shear stress.</li> </ul>
<b>Applications</b>	<p><b>RHODORSIL OILS</b> are used as :</p> <ul style="list-style-type: none"> <li>• Thermostatic fluids (- 50 °C to + 200 °C).</li> <li>• Dielectric fluids (impregnation of paper for condensers).</li> <li>• Anti-blotting products for photocopying machines.</li> <li>• Thinning and plastifying agents for RTV's and silicone sealants.</li> <li>• Lubricating and heat protecting agents for textile threads (synthetic sewing threads).</li> <li>• Ingredients in maintenance products (polishes, wax polishes, floor and furniture polishes, etc.).</li> <li>• Paint additives (anti-cratering, anti-floating/flooding and anti-scratching effects, etc.).</li> <li>• Water repellent treatment :               <ul style="list-style-type: none"> <li>- of powders (for paints and plastics),</li> <li>- of fibres : glass fibres.</li> </ul> </li> <li>• Release agents (mould release of plastics and metal castings).</li> <li>• Lubricants (lubrication of elastomers or plastics on metals).</li> <li>• Surfactants for styrene-butadiene foam.</li> </ul>

## Characteristics

	RHODORSIL OILS					
	47V50	47V100	47V300	47V350	47V500	47V1000
• Appareance .....	Colourless, limpid liquid					
• Viscosity at 25 °C, mm <sup>2</sup> /s, approx.....	50	100	300	350	500	1000
• Specific gravity at 25 °C, approx. ....	0.959	0.965	0.970	0.970	0.970	0.970
• Flash point (closed cup), °C, approx. ....	280	≥ 300	≥ 300	≥ 300	≥ 300	≥ 300
• Freezing point, °C, approx. ....	- 55	- 55	- 50	- 50	- 50	- 50
• Refractive index at 25 °C, approx. ....	1.402	1.403	1.403	1.403	1.403	1.403
• Surface tension at 25 °C, mN/m, approx. ....	20.7	20.9	21.1	21.1	21.1	21.1
• Vapour pressure at 200 °C, Pa, approx. ....	1.33	1.33	1.33	1.33	1.33	1.33
• Volume expansion coeff. between 25 and 100 °C, approx. ....	1.05.10 <sup>-3</sup>	9.45.10 <sup>-4</sup>	9.45.10 <sup>-4</sup>	9.45.10 <sup>-4</sup>	9.45.10 <sup>-4</sup>	9.45.10 <sup>-4</sup>
• Specific heat capacity between 40 and 200 °C, J/g, °C .....	1.46	1.46	1.46	1.46	1.46	1.46
• Thermal conductivity, W/m°C, approx. ....	0.16	0.16	0.16	0.16	0.16	0.16
• Viscosity / temperature coeff. (1), approx. ....	0.59	0.60	0.62	0.62	0.62	0.62
• Dielectric strength at 25 °C, kV/mm, approx. ....	15	16	16	16	16	16
• Dielectric constant at 25 °C between 0.5 and 100 kHz, approx. ....	2.80	2.80	2.80	2.80	2.80	2.80
• Power factor at 25 °C, at 100 kHz, approx. ....	1.10 <sup>-4</sup>	1.10 <sup>-4</sup>	1.10 <sup>-4</sup>	1.10 <sup>-4</sup>	1.10 <sup>-4</sup>	1.10 <sup>-4</sup>
• Permittivity at 25 °C, Ω.cm, approx. ....	1.10 <sup>14</sup>	1.10 <sup>15</sup>	1.10 <sup>15</sup>	1.10 <sup>15</sup>	1.10 <sup>15</sup>	1.10 <sup>15</sup>

(1) Viscosity / temperature coefficient = 1 - (viscosity at 100 °C / viscosity at 40 °C)

## Packaging

**RHODORSIL OILS 47 V 50 to 47 V 1000** are available in 25 and 200 kg drums, in 1000 kg containers or in 20 tonnes tankers.

## Storage and shelf life

When stored in its original unopened packaging at a temperature of between -20 and +50°C, **RHODORSIL OILS 47 V 50 to 47 V 1000** may be stored for up to 3 years from its date of manufacture (expiry date). Comply with the storage instructions and expiry date marked on the packaging.

Past this date, Rhodia Silicones no longer guarantees that the product meets the sales specifications.

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**Safety**

Consult the Safety Data Sheet for **RHODORSIL OILS 47 V 50 to 47 V 1000**.

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**Warning to users**

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and is in no way binding, particularly as regards infringement of or prejudice to third party rights through the use of our products.

**RHODIA CHIMIE GUARANTEES THAT ITS PRODUCTS COMPLY WITH ITS SALES SPECIFICATIONS.**

This information must on no account be used as a substitute for necessary prior tests which alone can ensure that a product is suitable for a given use.

Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorisations.

Users are requested to check that they are in possession of the latest version of this document and RHODIA CHIMIE is at their disposal to supply any additional information.

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### **Silicones Europe**

19 avenue Georges Pompidou - F-69486 LYON CEDEX 03

Tél. (33) 4 72 13 19 00 - Fax (33) 4 72 13 19 88 - Télex 305111 F

Rhodia Chimie - Société Anonyme au capital de 2.883.675.200 F - RCS Nanterre B 642 014 526

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